

# FiberVisions®

## HY-Soft

# Luxurious Softness

FiberVisions has developed a polypropylene based fiber which is second-to-none with regard to softness.

This softness is transferred to the carded, thermally bonded nonwovens, thereby giving the user an increase in comfort level.



*In several softness tests (internal FV method) nonwovens made of FiberVisions® HY-Soft score significantly higher in "softness" than other nonwovens made of other PP-fiber types.*

The patented fiber concept is the natural evolution of the trend towards softer and more comfortable products.

The fiber is intended for use in baby diapers (e.g. newborn baby diapers), feminine care and incontinence products and medical care products.

Major features are:

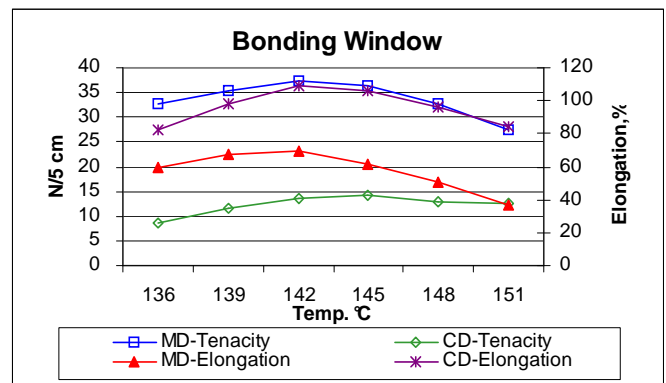
- Unique softness
- A fiber with good nonwoven processing:
  - Broad bonding window
  - Low bonding temperature
  - Normal carding speed
- The nonwovens strength and elongation properties can be compared with the properties of other FiberVisions® fiber types
- The fiber is available in a hydrophilic as well as a hydrophobic version and various botanical finishes

With regard to other fiber properties the FiberVisions® HY-Soft fiber behaves in the same way as the other FiberVisions® longspinning fibers:

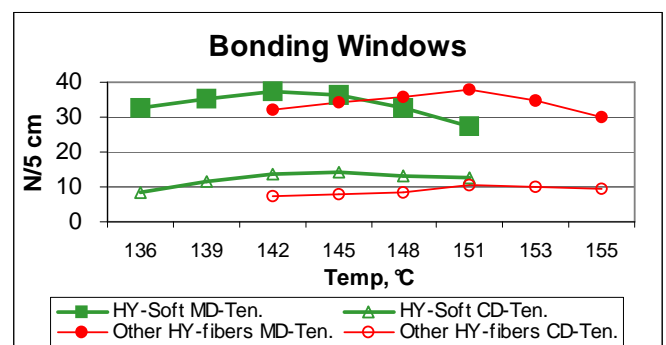
- A controlled surface characteristic ensures optimal bonding conditions
- The uniformity of the fibers ensures stable processing conditions minimizing down-time and downgraded materials
- The FiberVisions concept of adapting the fiber to suit the individual carding line maximizes nonwoven tenacities and elongation.

### Results from FiberVisions a/s pilot carding & calendering line









FiberVisions has obtained the following nonwovens data from tests on the carding & calendering line at 100 m/min carding speed  
(Typical data for a 20 g/m<sup>2</sup> product):













From the below graph it can be seen that nonwovens made of HY-Soft achieved their highest tenacities at approx. 8-10 °C lower temperatures than normal PP-fibers:



# Typical Fibre values and Nonwoven properties

 <b>FiberVisions® HY-Soft</b>			
	Nom. Value	Measure	Method
	2.2dtex	The weight in grams of a fibre of 10 km length	Internal FV test
	1.7-2.0 cN/dtex	Tensile strength of the fibre	Internal FV test
	350-400%	Elongation at break	Internal FV test
	40, 50 and 60 mm	Fiber length (under a prescribed load)	Internal FV test
	100% PO 136-148°C 159 °C	Raw material: Softening point Melting point (peak)	
	Variable	Crimp frequency (KD) no. of crimps/10 cm	Internal FV test
	0.35% or acc. to cust. needs	Spin finish level as weight %	Internal FV test

 <b>Typical data obtained on FiberVisions pilot thermal bonding line</b>			
	Nom. Value	Measure	Method
	All values refer to a 20 g/m <sup>2</sup> nonwoven, produced at optimum conditions at 100 m/min		
	19-22	Bonding Index, combining MD and CD tenacities	Formula
	35-40 N/5 cm	MD Tensile Strength	Internal FV test
	10-13 N/5 cm	CD Tensile Strength	Internal FV test
	50-70%	MD Elongation	Internal FV test
	80-120%	CD Elongation	Internal FV test
	< 3sec	Strike through time (hydrophilic version)	WSP 70.3
	<0.2g	Rewet (hydrophilic version)	WSP 80.10
	Depending on spin finish	Water Rising Column (hydrophobic version)	Internal FV test

\* All measurements are conducted under standard atmosphere according to ISO 554 (23 °C/50%).

Polyolefin fibers consist of 99% carbon and hydrogen The remaining 1% consist of water and applied spin finish.

The fiber bales are protected with polyolefin foil and closed with polyester straps. The product and the packaging materials are suitable for recycling and combustion. Inhouse waste should be kept clean to facilitate direct recycling. In disposal of any waste, be certain all applicable regulations are met.

For further information, see Material Safety Data Sheet or contact your FiberVisions representative.

The FiberVisions® HY-Soft is presently produced at the FiberVisions a/s plant in Denmark.  
HY-Soft is the trademark of FiberVisions.

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